

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000464**Date Inspected:** 17-Sep-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 530**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Bing**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Mock Up**Summary of Items Observed:**

Elevation 77:

Caltrans Quality Assurance (QA) Inspector Charlie Franco was present at the time requested to randomly observe work being performed for the fabrication of the Mock Up at elevation 77. The QA Inspector randomly observed ZPMC Non Destructive Testing (NDT) Technician Cai Xin Xin performing Magnetic Particle Examination (MT) to 3 excavations in 2 welds attaching longitudinal stiffeners to Sub-Assembly (SA) MUSA-MA2 Face A (Skin Plate A). There appeared to be no indications and the excavations appeared to comply with contract requirements.

Elevation 114:

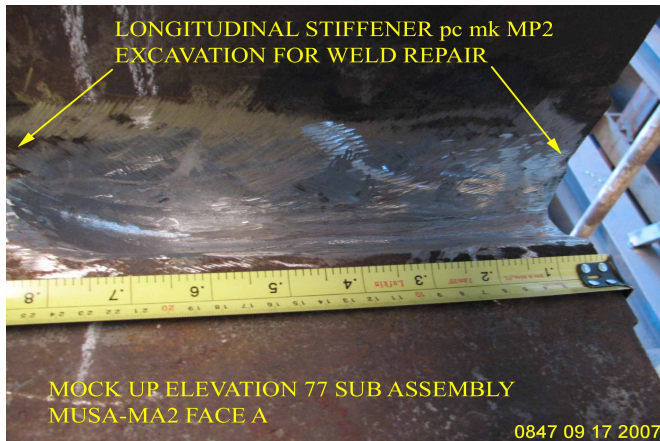
Caltrans QA Inspector Charlie Franco was present at the time requested to randomly observe work being performed for the fabrication of the Mock Up at elevation 114. The QA Inspector randomly observed ZPMC NDT Technician Cai Xin Xin performing MT on the tack welds attaching longitudinal stiffeners to SA MUSC-MA107 Face A (Skin Plate A). There appeared to be no indications and the tack welds appeared to comply with contract requirements.

The QA Inspector randomly observed ZPMC qualified welders Cao Hen Jin utilizing the FCAW process to weld longitudinal stiffeners to SA MUSC-MA 111 Face C (Skin Plate C). Mr. Cao was utilizing ZPMC Weld Procedure Specification (WPS) WPS-B-T-2232-TC-P5-F-1. The QA Inspector observed ZPMC CWI Xu Bing monitoring weld parameters. The QA Inspector also performed random verification of the weld parameters and

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documented them as follows: welding amperage 299 amps, welding voltage 30 volts with a travel speed of 290 millimeters per minute. Weld parameters appeared to comply with the above approved ZPMC WPS.



Summary of Conversations:

The QA Inspector observed that ZPMC welders had placed only one side of the root passes of the complete joint penetration welds attaching the longitudinal stiffeners to SA MUSC-107 Face A before proceeding to the 2nd longitudinal stiffener in the sequence. The weld joint numbers for these 4 welds are 1, 2, 3 and 4. This is a departure from what had been done on previous skin plates and was not according to the weld sequence stated in the ZPMC fabrication plans. The QA Inspector observed that the partial penetration welds on the same longitudinal stiffeners had been placed in the correct sequence, with the root passes being placed in the partial penetration welds on each side of the 1st stiffener in the weld sequence, and then proceeding to the 2nd stiffener in the sequence. The QA Inspector asked ZPMC QA Representative Shen Xue Jun why the weld sequence wasn't followed, but there appeared to be some confusion as to what it was that the QA Inspector was trying to ask. Mr. Shen asked the QA Inspector if he wanted to stop the work, and the QA Inspector informed Mr. Shen that he did not, and that he was only asking a question.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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| Inspected By: | Franco,Charlie | Quality Assurance Inspector |
| Reviewed By: | Cochran,Jim | QA Reviewer |
